January 31, 2017

REPORT OF PARIN PARIKH, M.D., F.A.C.C. ON CASE OF MR. TROY GOODE

I have been asked to provide an expert opinion regarding the circumstances of events and medical care of Mr. Troy Goode on July 18, 2015, which ended in his cardiac arrest and death. In particular, given my training and scope of practice in cardiovascular medicine, I have been asked to comment on the role of the events of that day, use of restraint and subsequent care playing a role in his cardiovascular collapse, cardiac arrest and eventual death. All of my opinions in this report are made to a reasonable degree of medical certainty in the field of cardiology.

I have been provided a copy of and reviewed the following documents: The Baptist Memorial Hospital – Desoto medical records; the Southaven Fire/EMS records including incident report, trip report, patient care record with heart monitoring trip and supplemental incident report; the Mississippi Medical Examiner Provisional Autopsy Report, Final Autopsy Report and Toxicology Report; and the preliminary and final death certificate; Southaven Police Incident Report/Supplemental Incident Report; a narrative summary of facts surrounding the case by counsel for Mrs. Goode.

I am being compensated at a rate of $300.00 per hour, plus expenses, for time taken away from my medical practice for research, analysis, and non-testimonial work. Deposition/court testimony is charged at $400.00 per hour, plus expenses. Attached hereto is a copy of my most recent Curriculum Vitae, including a list of publications. During the last 4 years, I have not testified as an expert at any trial or by deposition.

Initial arrest and EMS transport/care

Mr. Goode was in an agitated state. Prior to being taken into custody, Mr. Goode was bitten by a K9 officer presumably in the left arm. He was also fired on by a Taser dart. Officers at the scene put him in the prone maximal restraint (hog-tie) position.

He was subsequently transported by EMS in this position, and was also put in further restraints tied to the stretcher while still in the proximal maximal restraint position. An initial set of vital signs performed by EMS at 8:20pm showed a markedly elevated heart rate of 164 bpm. A set of vital signs taken 5 minutes later revealed a heart rate even higher at 186 bpm corresponding with a 30 point drop in the diastolic pressure.

During this time, despite obvious distress by a patient in the prone position there was no recorded oxygen saturation or use of supplemental oxygen. Given that the patient had a prior history of asthma and he was in the prone position, hypoxia was a serious concern that wasn't properly evaluated or treated. Hypoxia can both make the patient more agitated, as well as cause further tachycardia.

EXHIBIT 5

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A heart rate of 186 bpm is extremely elevated. A short rhythm strip was performed suggestive of a supraventricular tachycardia (SVT). SVT can be a condition that requires immediate medical attention especially when joined with other abnormalities such as hypoxia or hypotension. Treatment can include starting medication to treat SVT or electrical cardioversion. While a full diagnosis of the arrhythmia may not be able to be made in EMS transport, basic care such as O2 monitoring/IV hydration/supplemental O2 should have been implemented as part of the treatment strategy for tachycardia.

In this case, basic monitoring of oxygen saturation and oxygen supplementation was not performed. Failure to provide early treatment of Mr. Goode's hypoxia and tachycardia likely exacerbated the patent's agitation and tachycardia. Early treatment of SVT is important in preventing any deterioration of a cardiac dysrhythmia. In my opinion, the tachycardia was not addressed in any meaningful way including basic supportive care such as oxygen and IV hydration.

Hospital Care

My opinion is that maintaining Mr. Goode in the prone maximal restraint position prevented him from acquiring adequate care and attention despite abnormal vital signs and a deteriorating physical state. On initial exam, there is no mention of facial trauma/contusions or leg abrasions/contusions in the ER record, but these findings were present on autopsy. Initially at 8:33 pm vital signs were taken at triage with an elevated heart rate of 164, elevated respiratory rate of 24 and decreased O2 saturation of 90%. These are clear signs/evidence of cardiopulmonary compromise and abnormalities that should have been monitored and followed closely, and acted upon more immediately. Instead, there was no monitoring of these vital signs or a cardiac monitor. A basic laboratory workup, which would be important in evaluating the patient's overall status including his tachycardia, was not completed as well.

In addition, based on my opinion and review of the literature, maintaining Mr. Goode in the prone maximal restraint position is likely to lead to diminished cardiac output and ultimately contributed to cardiovascular collapse and arrest. There is a small body of literature that supports respiratory compromise from prone maximal restraint. Medical literature also reveals that being maintained in the prone position diminishes cardiac filling by compromising flow in the inferior vena cava (Dharmavaram, Ho, Savaser) and that being in the prone position compromises stroke volume of the heart (the amount of blood the heart squeezes forward) and compromised cardiac output (Dharmavarm, Ho, Shimuzu).

These studies are done in very controlled settings in normal individuals not under extreme duress. These studies also measure cardiac filling and output only after a few minutes of prone positioning, and Mr. Goode was in the prone position for over an hour in an extremely agitated state. Moreover, these studies also show that patients with an already compromised cardiac status showed an even greater reduction in cardiac output and heart function in the prone position

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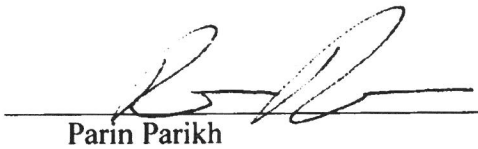
(Shimizu). Other studies show individuals with pre-existing medical conditions are unable to tolerate the prone position, even without maximal restraint (hogtie), without experiencing a significant clinical deterioration of their condition including hypoxia and respiratory distress (Meredith). His body's capacity to overcome the restrictions in lung volume and blood flow from being in the prone position were limited as he was under extreme distress, had a lowered oxygen saturation, had an SVT with heart rate already in the 160s-180s, and was agitated. Each of these factors constitute an insult to a patient's cardiovascular health and reduce the body's natural ability to compensate for the compromised cardiac output caused by the prone hogtie restraint.

Mr. Goode's Death

Given that the patient was in a supraventricular tachycardia with diminished stroke volume, likely dehydrated, under influence of LSD and marijuana, bitten by a K9, agitated, possibly hypoxic without supplemental O2 or IV hydration, he had little cardiac reserve for further insult. While healthy individuals without these stressors may be able to tolerate maximal prone position (hogtie), Mr. Goode had diminished cardiovascular reserve and subsequently went into full hemodynamic collapse and cardiac arrest after over an hour and a half without monitoring or treatment in the prone maximal restraint position. There was no cardiac monitor present to document any signs of decline, despite his initial very abnormal vital signs. A prompt reassessment of his restraint position at any point of care could have facilitated improved care of his oxygen levels, heart rate and overall care.

To summarize, it is my opinion that being maintained in the prone position prevented a proper assessment and monitoring of Mr. Goode's medical condition, and likely was a substantial factor contributing to reduced cardiac output and eventual hemodynamic collapse given the circumstances surrounding his condition and care.



Parin Parikh

1/31/17

Date

July 31, 2017

AMENDED REPORT OF PARIN PARIKH, M.D., F.A.C.C. ON CASE OF MR. TROY GOODE

I have been asked to provide an expert opinion regarding the circumstances of events and medical care of Mr. Troy Goode on July 18, 2015 which ended in his cardiac arrest and death. In particular, given my training and scope of practice in cardiovascular medicine, I have been asked to comment on the role of the events of that day, use of restraint and subsequent care playing a role in his cardiovascular collapse, cardiac arrest and eventual death. All of my opinions in this report are made to a reasonable degree of medical certainty in the field of cardiology.

I have been provided a copy of and reviewed the following documents: The Baptist Memorial Hospital – Desoto medical records; the Southaven Fire/EMS records including incident report, trip report, patient care record with heart monitoring trip and supplemental incident report; the Mississippi Medical Examiner Provisional Autopsy Report, Final Autopsy Report and Toxicology Report; and the preliminary and final death certificate; Southaven Police Incident Report/Supplemental Incident Report; a narrative summary of facts surrounding the case by counsel for Mrs. Goode. Following my original expert report, I was provided with a copy of and reviewed the following documents: Expert Reports of Defense experts Dr. Vilke and Dr. Peacock, and the deposition of Dr. Cyril Wecht.

I am being compensated at a rate of $300.00 per hour, plus expenses, for time taken away from my medical practice for research, analysis, and non-testimonial work. Deposition/court testimony is charged at $400.00 per hour, plus expenses. Attached hereto is a copy of my most recent Curriculum Vitae, including a list of publications. During the last 4 years, I have not testified as an expert at any trial or by deposition.

Initial arrest and EMS transport/care

Mr. Goode was in an agitated state. Prior to being taken into custody, Mr. Goode was bitten by a K9 presumably in the left arm. He was also fired on by a Taser dart. Officers at the scene put him in the prone maximal restraint (hog-tie) position.

He was subsequently transported by EMS in this position, and was also put in further restraints tied to the stretcher while still in the proximal maximal restraint position. An initial set of vital signs performed by EMS at 8:20pm showed a markedly elevated heart rate of 164 bpm. A set of vital signs taken 5 minutes later revealed a heart rate even higher at 186 bpm corresponding with a 30 point drop in the diastolic pressure.

During this time, despite obvious distress by a patient in the prone position there was no recorded oxygen saturation or use of supplemental oxygen. Given that the patient had a prior history of asthma and he was in the prone position, hypoxia was a serious concern that wasn't

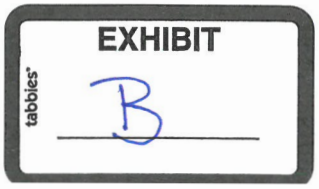


EXHIBIT 5-sup report

properly evaluated or treated. Hypoxia can both make the patient more agitated, as well as cause further tachycardia.

A heart rate of 186 bpm is extremely elevated. A short rhythm strip was performed suggestive of a supraventricular tachycardia (SVT). SVT can be a condition that requires immediate medical attention especially when joined with other abnormalities such as hypoxia or hypotension. Treatment can include starting medication to treat SVT (such as adenosine) or electrical cardioversion. While a full diagnosis of the arrhythmia may not be able to be made in EMS transport, basic care such as O2 monitoring/IV hydration/supplemental O2 should have been implemented as part of the treatment strategy for tachycardia.

In this case, basic monitoring of oxygen saturation and oxygen supplementation was not performed. Failure to provide early treatment of Mr. Goode's hypoxia and tachycardia likely exacerbated the patent's agitation and tachycardia. In addition, the stress of being forced into the prone maximal position could also lead to further worsening of hypoxia, tachycardia, and agitation, which would lead to continued struggle against the restraints and continued deterioration. Early treatment of SVT is important in preventing any deterioration of a cardiac dysrhythmia. In my opinion, the tachycardia was not addressed in any meaningful way including basic supportive care such as oxygen and IV hydration.

Hospital Care

My opinion is that maintaining Mr. Goode in the prone maximal restraint position prevented him from acquiring adequate care and attention despite abnormal vital signs and a deteriorating physical state. On initial exam, there is no mention of facial trauma/contusions or leg abrasions/contusions in the ER record, but these findings were present on autopsy. Initially at 8:33 pm vital signs were taken at triage with an elevated heart rate of 164, elevated respiratory rate of 24 and decreased O2 saturation of 90%. These are clear signs/evidence of cardiopulmonary compromise and abnormalities that should have been monitored and followed closely, and acted upon more immediately. Instead, there was no monitoring of these vital signs or a cardiac monitor. A basic laboratory workup, which would be important in evaluating the patient's overall status including his tachycardia, was not completed as well.

In addition, based on my opinion and review of the literature, maintaining Mr. Goode in the prone maximal restraint position can cause diminished cardiac output and ultimately contributed to cardiovascular collapse and arrest. There is a small body of literature that supports respiratory compromise from prone maximal restraint. In addition, medical literature also reveals that being maintained in the prone positioned can reduce blood flow coming into the heart (compromising flow in the inferior vena cava which delivers blood to the heart), and can decrease the amount of blood flow being produced by the heart (reduction in both stroke volume and cardiac output). Most of these studies looked at the heart with ultrasound or in one study, nuclear imaging, that assessed heart size and function during different positions.

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One study of 25 healthy patients (Ho JD, et al) showed that the prone position with weights on their backs up to 147 pounds showed a significant reduction in the size of the inferior vena cava (IVC). These changes were seen just two minutes after the weight was placed. The size of the inferior vena cava is often used as a surrogate for volume status in clinical settings as well as a measure of blood flow into the heart. Diminished blood flow from the inferior vena cava compromises cardiac output, especially in someone who already has tachycardia, tachypnea, and hypoxia and is under restraint for a long period of time. A study by Savaser, et al took 25 healthy males and subjected them to 5 different body positions including the prone maximal restraint position with up to 100 pounds of weights for a short amount of time of 3 minutes. Even in just 3 minutes in healthy males in normal conditions, there was a reduction in the stroke volume of the heart (the amount of blood the heart pumps out with each beat). Just as in the Ho, et al study changes in the IVC size were seen in the prone position with weight of 100 pounds. There were no changes in cardiac output in this study, but the subjects were under testing conditions for only 3 minutes and other methodological issues may have affected the measurement of cardiac output in this and the Ho study.

Another study by Dharmavam et al examined the role of prone positioning in patients undergoing surgery in the prone position. Patients who underwent spine surgery that required prone position were studied with an ultrasound of their heart during surgery. These were patients that had a protected airway (by intubation/ventilator machines) and had hydration via intravenous fluids. Even in this controlled surgical setting, a reduction in both stroke volume and cardiac index was seen in patients in the prone position. Another study by Shimizu, et al supports the same finding that the prone position leads to lower stroke volume and lower cardiac output.

These studies were done in very controlled settings in normal individuals not under extreme duress. These studies also measure cardiac filling and output only after a few minutes of prone positioning, and Mr. Goode was in the prone position for over an hour in an extremely agitated state. Moreover, these studies also show that patients with an already compromised cardiac status showed an even greater reduction in cardiac output and heart function in the prone position (Shimizu, et al).

Other studies show individuals with pre-existing medical conditions are unable to tolerate the prone position, even without maximal restraint (hogtie), without experiencing a significant clinical deterioration of their condition including hypoxia and respiratory distress (Meredith, et al). For example in the Meredith, et al study, 8 patients with chronic obstructive pulmonary disease (COPD) were subjected to different positions including the prone position with soft wrist restraints. 3 patients could not even complete the prone positioning with soft wrist restraints and developed severe respiratory distress and hypoxia that caused them to stop the study.

Mr. Goode's capacity to overcome the restrictions in lung volume and blood flow from being in the prone position were limited as he was under extreme distress, had a lowered oxygen

saturation, had an SVT with heart rate already in the 160s-180s, and was agitated. Each of these factors constitute an insult to a patient's cardiovascular health and reduce the body's natural ability to compensate for the compromised cardiac output caused by the prone hogtie restraint.

Mr. Goode's Death

Given that the patient was in a supraventricular tachycardia with diminished stroke volume, likely dehydrated, under influence of LSD and marijuana, bitten by a K9, agitated, possibly hypoxic without supplemental O2 or IV hydration, he had little cardiac reserve for further insult. While healthy individuals without these stressors may be able to tolerate maximal prone position (hogtie), Mr. Goode had diminished cardiovascular reserve and subsequently went into full hemodynamic collapse and cardiac arrest after over an hour and a half without monitoring or treatment in the prone maximal restraint position.

The most recent guidelines regarding cardiopulmonary resuscitation (CPR) from the American Heart Association (AHA) were published in 2015. In specifically addressing in hospital cardiac arrest, the guidelines note the most common cause of cardiac arrests (which included arrests in the emergency room) are respiratory failure and circulatory shock. Prior to cardiac arrest, these conditions often share abnormal changes in physiology and vital signs (such as tachycardia, tachypnea, hypoxia or hypotension of which Mr. Goode had 3 of the 4 abnormal vital signs).

Cardiac arrest in the hospital often represents the progression of a physiologic instability and a failure to identify and stabilize a patient with abnormal physiology in a timely manner. The standard of care as defined by the AHA cardiac arrest guidelines is prompt recognition of these abnormalities by a trained medical team and continued surveillance/intervention until the patient is more stable. In Mr. Goode's case there was no cardiac monitor or medical personnel present to document any signs of decline, despite his initial very abnormal vital signs. Given this initial abnormal set of vital signs, prompt reassessment and continued monitoring was indicated. If an initial O2 saturation reading of 90% was thought to be erroneous, then a subsequent normal measurement should have followed and could have confirmed that assumption. When an abnormal vital sign such as hypoxia is subsequently followed by cardiac arrest, it is not plausible to consider this just an erroneous reading. A prompt reassessment of his restraint position at any point of care would have facilitated improved monitoring and management of his oxygen levels, heart rate and overall care.

To summarize, it is my opinion that being maintained in the prone position prevented a proper assessment and monitoring of Mr. Goode's medical condition, and likely was a substantial factor contributing to reduced cardiac output and eventual hemodynamic collapse given the circumstances surrounding his condition and care.

My expert cardiovascular opinion on excited delirium is as follows. While recognizing there is at least one professional association which recognizes excited delirium as a diagnosis and possible cause of death, the syndrome of excited delirium is a proposed hypothesis without a clear

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definition or standard method of diagnosis (either clinically or on autopsy), with no known or scientifically proven pathophysiologic basis, no clear evidence linking it to cardiopulmonary arrest, and is not a diagnosis that is used or recognized in the field of cardiovascular medicine. In addition, the diagnosis of excited delirium syndrome is not recognized or mentioned in the most updated version of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5), which is the authoritative and most comprehensive text in psychiatric medicine (including diagnoses of substance related disorders and delirium). Futhermore, the most recent International Classification of Diseases (ICD-10), a medical classification list by the World Health Organization, does not recognize or list excited delirium as a known or recognized diagnosis (though I am aware proponents of the hypothesis claim that other codes included in ICD-9 and ICD-10 describe the entity of excited delirium and hence are synonymous). The ICD-10 is the most commonly used and comprehensive medical diagnosis list that is mandated for use by the Centers for Medicare and Medicaid Services (CMS), National Center for Health Statistics (NCHS), and death certificates in the United States.

Parin Parikh

8/3/17

Date

REFERENCES

Ho JD, Dawes DM, Moore JC, et al. Effect of position and weight force on inferior vena cava diameter – Implications for arrest-related death. Forensic Sci Int. 2011;212:256-9.

Savaser, DJ, Campbell C, Castillo EM, et al. The effect of the prone maximal restraints position with and without weight force on cardiac output and other hemodynamic measures. J Forens Leg Med. 2013;20:991-5.

Dharmavaram S, Jellish WS, Nockels RP, et al. Effect of Prone Positioning Systems on Hemodynamic and Cardiac Function During Lumbar Spine Surgery: An Echocardiographic Study. Spine. 2006;31(12):1388-93.

Shimizu, M, Fujii H, Yamawake N, Nishizaki M. Cardiac function changes with switching from the supine to prone position: Analysis by quantitative semiconductor gated single-photon emission computed tomography. J Nucl Cardiol. 2015;22:301-7.

Meredith C, Taslaq S, Kon OM, Henry J. The cardiopulmonary effects of physical restraint in subjects with chronic obstructive pulmonary disease. J Clin Forensic Med. 2005;12:133-6.

American Heart Association. 2015 American Heart Association guidelines update for cardiopulmonary resuscitation and emergency cardiovascular care. *Circulation*. 2015;132:S313–S589.

Vilke GM, DeBard ML, Chan TC, et al. Excited Delirium Syndrome ExDS: Defining Based on a Review of the Literature. J Emerg Med. 2012;43(5):897-905.